查询PS2501A供应商

CEL

NEC's HIGH ISOLATION VOLTAGE SINGLE TRANSISTOR TYPE PHOTOCOUPLER SERIES

PS2501A
PS2501AL-1

FEATURES

- **HIGH ISOLATION VOLTAGE**
  BV: 5000 $V_{r.m.s}$
- **UL AWAITING APPROVAL**
- **ORDERING NUMBER OF TAPING PRODUCT**
  PS2501AL-1-E3, E4, F3, F4

DESCRIPTION

NEC's PS2501A-1 is an optically coupled isolator containing a GaAs light emitting diode and an NPN silicon phototransistor.

NEC's PS2501A-1 is in a plastic DIP (Dual In-line Package) and the PS2501AL-1 are lead bent type (Gull-wing) for surface mount.

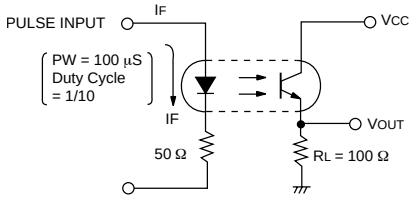
APPLICATIONS

- **POWER SUPPLY**
- **TELEPHONE / FAX**
- **FACTORY AUTOMATION**
- **PROGRAMMABLE LOGIC CONTROLLER**

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

PART NUMBER PACKAGE OUTLINE		PS2501A-1, PS2501AL-1			
SYMBOLS	**PARAMETERS AND CONDITIONS**	**UNITS**	**MIN**	**TYP**	**MAX**
DIODE					
V_F	Forward Voltage, I_F = 10 mA	V		1.1	1.4
I_R	Reverse Current, V_R = 5 V	μA			5
C_t	Terminal Capacitance, V= 0, f = 1.0 MHz	pF		10	
TRANSISTOR					
I_{CEO}	Collector to Emitter, Vce = 70 V, I_F = 0	nA			100
COUPLED					
CTR	Current Transfer Ratio (I_C/I_F) [1], I_F= 5 mA, V_{CE} = 5 V	%	50		400
$V_{CE\ (sat)}$	Collector Saturation Voltage, I_F = 10 mA, I_C = 2 mA	V		0.13	0.3
R_{I-O}	Isolation Resistance at V_{I-O} = 1.0 kVDC	Ω	10^{11}		
C_{I-O}	Isolation Capacitance at V = 0 V, f = 1.0 MHz	pF		0.4	
t_r	Rise Time [2], V_{CC} = 10 V, I_C = 2 mA, R_L = 100 Ω	μs		5	
t_f	Fall Time [2], V_{CC} = 10 V, I_C = 2 mA, R_L = 100 Ω			7	

Notes:
1. CTR rank
   N: 50 to 400 %
   H: 80 to 160 %
   W: 130 to 260 %
   Q: 100 to 200%
   L: 200 to 400 %
2.Test Circuit for Switching



ABSOLUTE MAXIMUM RATINGS[1] (T_A = 25°C)

SYMBOLS	PARAMETERS	UNITS	RATINGS
DIODE			
V_R	Reverse Voltage	V	6
I_F	Forward Current	mA	30
ΔP_D/°C	Power Dissipation Derating	mW/°C	1.5
P_D	Power Dissipation	mW	150
$I_{F\ (PEAK)}$	Peak Forward Current[2]	A	0.5
TRANSISTOR			
V_{CEO}	Collector to Emitter Voltage	V	70
V_{ECO}	Emitter to Collector Voltage	V	5
I_C	Collector Current	mA	30
ΔP_C/°C	Power Dissipation Derating	mW/°C	1.5
P_C	Power Dissipation	mW	150
COUPLED			
BV	Isolation Voltage[3]	$V_{r.m.s.}$	5000
T_A	Operating Ambient Temp.	°C	-55 to +100
T_{STG}	Storage Temperature	°C	-55 to +150

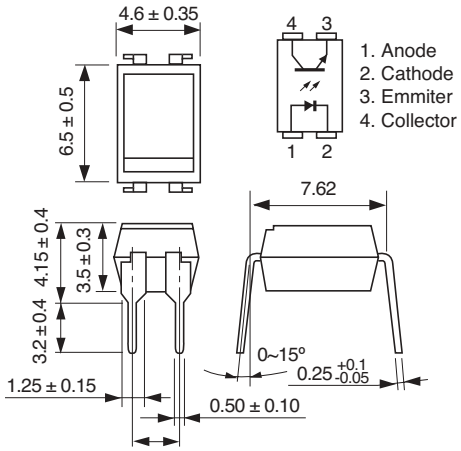
Notes:
1. Operation in excess of any one of these parameters may result in permanent damage.
2. PW = 100 μs, Duty Cycle = 1 %.
3. AC voltage for 1 minute at T_A = 25 °C, RH = 60 % between input and ouput.

ORDERING INFORMATION

PART NUMBER	PACKAGE	PACKAGE STYLE
PS2501A-1	4-PIN DIP	Magazine case 100 pcs
PS2501AL-1		
PS2501AL-1-E3	4-PIN DIP	Embossed tape 1000 pcs/reel
PS2501AL-1-E4		
PS2501AL-1-F3	4-PIN DIP	Embossed tape 2000 pcs/reel
PS2501AL-1-F4		

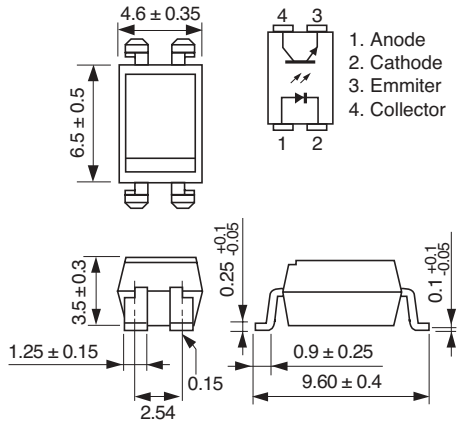
OUTLINE DIMENSIONS (Units in mm) **DIP TYPE**

PS2501A-1



OUTLINE DIMENSIONS (Units in mm) **LEAD BENDING TYPE**

PS2501A-1



Life Support Applications

These NEC products are not intended for use in life support devices, appliances, or systems where the malfunction of these products can reasonably be expected to result in personal injury. The customers of CEL using or selling these products for use in such applications do so at their own risk and agree to fully indemnify CEL for all damages resulting from such improper use or sale.